

Home All Journals International Journal of Occupational Safety and Ergonomics List of Issues Latest Articles Influence of an armrest support on handgrip strength in different arm and shoulder flexion angles in overhead postures

98 Views
0 CrossRef citations to date
0 Altmetric

Influence of an armrest support on handgrip strength in different arm and shoulder flexion angles in overhead postures

Jorge-Hernán Restrepo-Correa, Juan-Luis Hernández-Arellano, Carlos Alberto Ochoa-Ortiz & Aidé-Aracely Maldonado-Macias

Accepted author version posted online: 02 Mar 2022, Published online: 17 Mar 2022

Download citation <https://doi.org/10.1080/10803548.2022.2041798> Check for updates

Full Article Figures & data References Citations Metrics Reprints & Permissions Get access

Abstract

A study was undertaken in which the handgrip strength in three arm positions above the shoulder was measured to compare handgrip strength when arm support is used and when it is not used. Grip forces were generated in pairs of flexion angles, corresponding to shoulder and elbow at 90°–90°, 135°–45° and 160°–20°. Thirty-two participants completed the present study; 23 men and nine women with a median age of 23.1 (SD ±3.6) years. A manual handgrip dynamometer (0–90 kg) and an adjustable angle arm support (AAAS) were used during the data collection. Two-way analysis of variance (ANOVA) for repeated measurements indicates a significant effect of the AAAS factor on the handgrip strength, as well as on the AAAS × angle interaction. However, there is no significant effect of the angle factor on the AAAS × angle interaction.

Q Keywords: handgrip strength, elbow flexion angle, shoulder flexion angle, arm support, overhead postures

Related research

People also read Recommended articles Cited by

Associations between observed time sitting at work and musculoskeletal symptoms: a repeated-measures study of manufacturing workers

Jennifer L. Garza et al.
International Journal of Occupational Safety and Ergonomics
Published online: 17 Mar 2022

Revised NIOSH lifting equation: a critical evaluation

Samam Ahmad et al.
International Journal of Occupational Safety and Ergonomics

Sample our Computer Science Journals
>> Sign in here to start your access to the latest two volumes for 14 days

19°C. Prac. despejado 01:54 a.m. 01/12/2022